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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,776	07/08/2005	Toshihiko Ohashi	0216-0516PUS1	1474

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EXAMINER	
CHANG, VICTOR S	

ART UNIT	PAPER NUMBER
1771	

NOTIFICATION DATE	DELIVERY MODE
08/28/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/541,776	OHASHI ET AL.	
	Examiner	Art Unit	
	Victor S. Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 August 2007 and 22 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-15* is/are pending in the application.

4a) Of the above claim(s) *6-13* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,14 and 15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. Applicants' amendments and remarks filed on 8/21/07 and 6/22/07 have been entered. Claims 1, 14 and 15 have been amended. Claims 1-3, 5, 14 and 15 are active.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. In view of the amendment, the rejections over 35 USC 101 and 112 are withdrawn. The grounds of rejection have been updated as set forth below.

Rejections Based on Prior Art

4. Claims 1-3, 5, 14 and 15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lange et al. [US 4816333].

Lange's invention [col. 2, lines 36-42; col. 3, lines 7-10; col. 4, lines 11-55; Examples 1 and 13] relates to an antireflective polymeric substrate having a porous silica coating thereon. The porous coating comprises a continuous gelled network of voids between the silica particles. A colloidal solution of silica particles from which the gelled network is obtained is capable of providing an open porosity of about 25 to 70 percent when dried to provide a refractive index between 1.20-1.30. If the open porosity is too small, the properties of the coating, such as adhesion and antireflectance may be reduced. If the open porosity is too large, the coating is weakened and may have reduced adhesion to the substrate. The average primary particle size of the colloidal silica particles is preferably less than about 70 Å to achieve good adhesion

(abrasion resistance) of the coating to the substrate and antireflection properties. Fig. 2 shows the antireflective property of a silica coated polyethylene terephthalate (PET) film.

For claim 1, Lange is silent about the size of the pore opening area and its relationship to the primary particle size. However, since Lange discloses the same product (an antireflective polymeric substrate having a porous silica coating thereon), made by the same chemistry (a gelled network of colloidal silica particles having the same average primary particle size), and for the same use (abrasion resistant antireflective coating), further Lange specifically teaches the entire workable range of porosity which is critical for providing coating adhesion and instantly claimed refractive index, a workable size of the pore opening area and its relationship to the primary particle size are deemed to be either anticipated by Lange, or obviously provided by practicing the invention of prior art. Regarding item the newly added product by process limitation of *forming* the porous silica layer *from* a silica sol of colloidal moniliform silica strings, since the method limitation has not been shown on the record to produce a patentably distinct article, the formed article is rendered *prima facie* obvious, and the process is not giving patentable weight.

For claims 2 and 3, even if the characteristics of the moniliform silica strings are considered, they are presumed to be elements of a product-by-process limitation, as set forth above, and since the method limitations have not been shown on the record to produce a patentably distinct article, the formed article is rendered *prima facie* obvious.

For claim 5, since Lange teaches the same PET substrate for the same use as the instant invention, the hardness of the substrate is deemed to be inherent to the PET film.

For claims 14 and 15, since they claim essentially the same scope as claims 1-4, they are also rejected for the same reasons as set forth above.

Response to Argument

5. Applicants argue [Remarks page 3] that Lange teaches away from the use of agglomerated silica particles, such as moniliform silica strings, in a coating composition for producing an antireflection film. However, while Lange avoids premature particle agglomeration *prior to* the preparation of the coating solution, nowhere is there a teaching that th coating solution does not contain agglomerated particles. Further, there is no evidence whatsoever that the difference in process step necessarily produces a distinct antireflective porous silica coating.

Applicants argue [pages 3-4] that the non-linked silica particles used in Lange are agglomerated in substantially closest packed form as shown in Fig. 9 of present application, and it is impossible to obtain a silica layer having a large number of large pores. However, absent any factual support that Lange necessarily forms a closest packed form, applicants appear to analyze the prior art in vacuum and ignore that Lange teaches an open porosity over a wide range, which necessarily infers that pore sizes can be optimized for end use.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Victor S Chang/
Primary Examiner, Art Unit 1771

8/24/2007